

# DRUVA® TEC MANIFOLD – MTMHOSSP | MTMHESP | MTMHSSP

MANIFOLD | TEC LINE (BRASS) | 100 m<sup>3</sup> SERIES | HIGH PRESSURE VERSION | 2 INLETS | SEMI-AUTOMATIC  
CHANGEOVER | SINGLE STAGE | PROCESS GAS PURGING AT INLET



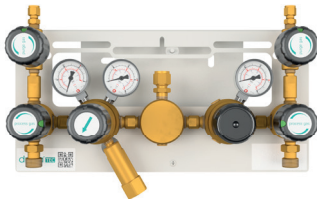
HO VERSION – HIGH PRESSURE REGULATOR WITH FKM-SEAL

HE VERSION – HIGH PRESSURE REGULATOR WITH EPDM-SEAL

HS VERSION – HIGH PRESSURE REGULATOR WITH SST VALVE AND EPDM-SEAL (ONLY FOR MISON)

Manifolds for use in supply systems for inert, flammable, oxidizing gases and gas mixtures up to gas purity 5.0.

Not suitable for Acetylene, corrosive and/or toxic gases and their mixtures



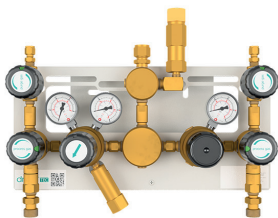
Type: MTMHxSSP00

#### Option P0

- Process gas purging at inlet

#### Special 0

- no special



Type: MTMHxSSP0U

#### Option P0

- Process gas purging at inlet

#### Special U

- Check valve at inlet
- Safety valve at outlet

## SPECIAL FEATURES

- > Metallic sealing of the shut-off valves and pressure regulator against atmosphere by Elgiloy/Hastelloy diaphragms.
- > No increase in outlet pressure with decreasing inlet pressure due to the use of a pressure reducer with inlet pressure compensation
- > Very compact design
- > Easy installation due to splitted plates for the manifold

### TECHNICAL DATA – MANIFOLD

|                               |                    |
|-------------------------------|--------------------|
| <b>Working temperature:</b>   | -40 °C to +60 °C   |
| <b>Inlet pressure range:</b>  | 60   200   300 bar |
| <b>Outlet pressure range:</b> |                    |

| Nominal Outlet p2 pressure | Right Regulator Setting p2 | Left Regulator Setting p2 |                |
|----------------------------|----------------------------|---------------------------|----------------|
|                            | Flow 0,5m <sup>3</sup> /h  | Flow 0,5m <sup>3</sup> /h |                |
| (bar)                      | (bar)                      | (bar)                     |                |
|                            |                            | Arrow to left             | Arrow to right |
| 10                         | 11                         | 13,2                      | 8,8            |
| 20                         | 23                         | 25,5                      | 20,5           |
| 40                         | 48                         | 55                        | 41             |
| 100                        | 110                        | 120                       | 100            |

|                                                                               |                                                                                                                   |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Nominal flow:</b>                                                          | 100 m <sup>3</sup> /h (N <sub>2</sub> ) according to ISO 7291 at 20 bar outlet pressure and 41 bar inlet pressure |
| <b>Weight:</b>                                                                | 10,54 (Weight refers to the basic version of the manifold)                                                        |
| <b>Inlet - &amp; outlet connection:</b>                                       | see ordering information                                                                                          |
| <b>Leakage rate seat:</b>                                                     | max. 5 x 10 <sup>-6</sup> mbar l/s (Helium)                                                                       |
| <b>Leakage rate outside:</b>                                                  | max. 5 x 10 <sup>-6</sup> mbar l/s (Helium)                                                                       |
| <b>Pressure gauges rates (in brackets- pressure rates):</b>                   | 18 (10)   40 (20)   65 (40)   80 (60)   160 (100)   315 (200) 400 (300) bar                                       |
| <b>Cracking pressure relief valves (in brackets – Outlet pressure rates):</b> | 16 (10)   30 (20)   60 (40)   140 (100) bar                                                                       |

### TECHNICAL DATA – REGULATOR

LTMHxSJ

see separate data sheet

### TECHNICAL DATA – SHUT-OFF VALVES

VTMDSMIR – 4 PORT (3X INLET – 1X OUTLET)

VTLA – 2 PORT

see separate data sheets

### TECHNICAL DATA – MOUNTING PLATES MANIFOLD

|                                                              |                                                                                                                                                                       |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ground plate:</b>                                         | Stainless Steel (polished)<br>Option to secure arrestor cable of hoses with hook on ground plate.<br>Grounding bolt<br>Cut outs on top and bottom allows installation |
| <b>Dimensions ground plate:</b><br>(Height x Width x Length) | 194 x 30 x 230 mm                                                                                                                                                     |
| <b>Front plate:</b>                                          | Stainless Steel (polished)<br>Cut outs for replacement of gauges<br>Free space for additional installer label (e.g. remark for next maintenance)                      |
| <b>Dimensions front plate:</b><br>(Height x Width x Length)  | 194 x 30 x 400 mm                                                                                                                                                     |
| <b>Marking on panel:</b>                                     | Product range label<br>QR-Code – Link to the product overview on the website and from there the operating instructions (IFU) can be accessed                          |

## TECHNICAL DATA – SAFETY VALVE

|                          |                                                                               |
|--------------------------|-------------------------------------------------------------------------------|
|                          | Spring loaded according P.E.D. 2014/68/EU and AD2000 (A2)                     |
| <b>Opening pressure:</b> | 16   30   60 bar                                                              |
| <b>Material:</b>         | Housing and metallic parts made of brass, pressure spring made of alloy steel |
| <b>Seat and seal:</b>    | FKM / EPDM                                                                    |

## TECHNICAL DATA – BALL VALVE UP TO 20 BAR

|                                      |                          |
|--------------------------------------|--------------------------|
| <b>Max. working pressure:</b>        | 20 bar                   |
| <b>Material gas wetted parts:</b>    |                          |
| <b>Body</b>                          | Brass nickel plated      |
| <b>Ball</b>                          | Brass hard chrome plated |
| <b>Ball seal</b>                     | PTFE                     |
| <b>Gearshift seal</b>                | FKM / EPDM               |
| <b>Nominal width (free passage):</b> | 13 mm                    |

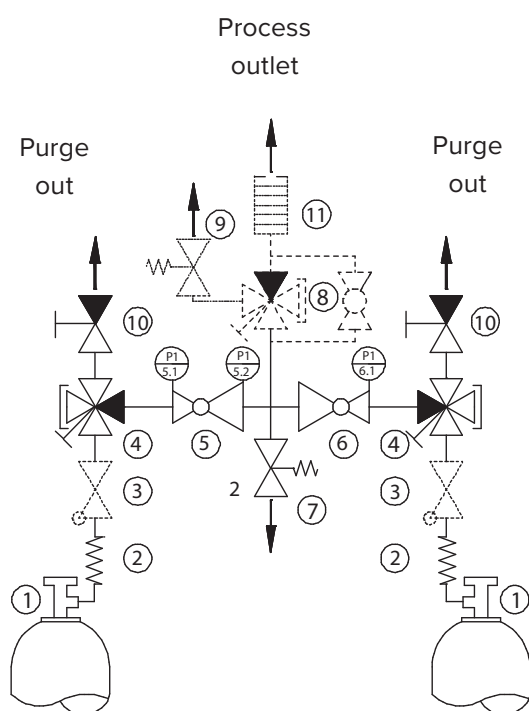
## TECHNICAL DATA – BALL VALVE UP TO 40 BAR – NOT SUITABLE FOR OXYGEN

|                                      |                 |
|--------------------------------------|-----------------|
| <b>Max. working pressure:</b>        | 40 bar          |
| <b>Material gas wetted parts:</b>    |                 |
| <b>Body</b>                          | Stainless Steel |
| <b>Ball</b>                          | Stainless Steel |
| <b>Ball seal</b>                     | PTFE            |
| <b>Gearshift seal</b>                | PTFE            |
| <b>Nominal width (free passage):</b> | 15 mm           |

## TECHNICAL DATA – CHECK VALVE

|                                                                      |                                 |
|----------------------------------------------------------------------|---------------------------------|
| <b>Max. Working pressure:</b>                                        | 300 bar                         |
| <b>Pressure loss at inlet pressure 41 bar and flow rate 100m³/h:</b> | 3,8 bar                         |
| <b>Material gas wetted parts:</b>                                    |                                 |
| <b>Valve body</b>                                                    | Brass                           |
| <b>Filter</b>                                                        | Sinter bronze SIKA-B            |
| <b>Valve seat</b>                                                    | Silicon nitride ceramic (Si3N4) |
| <b>Spring</b>                                                        | Stainless Steel 316 L           |

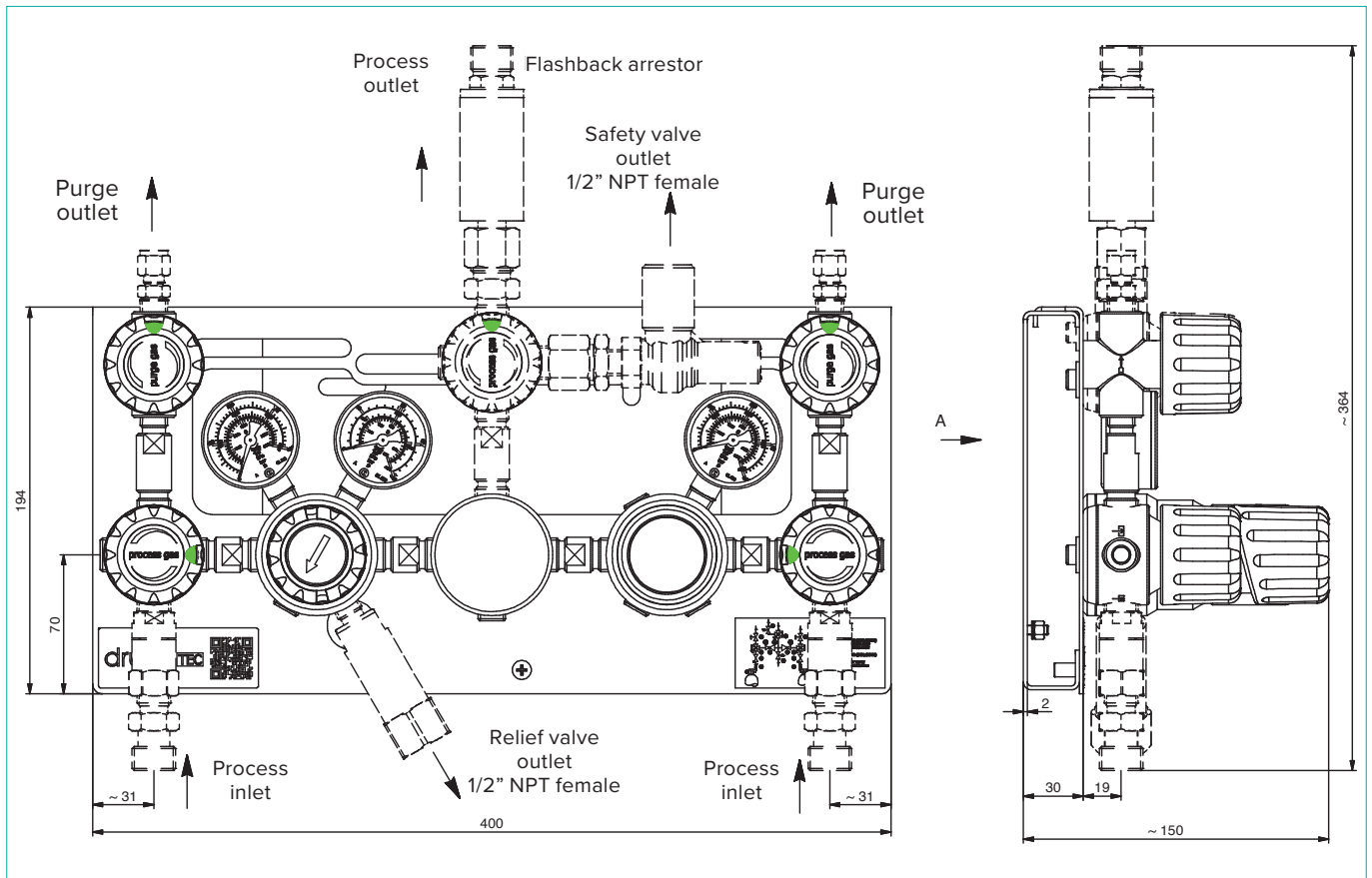
## TECHNICAL DRAWING – FLOW SCHEMATIC



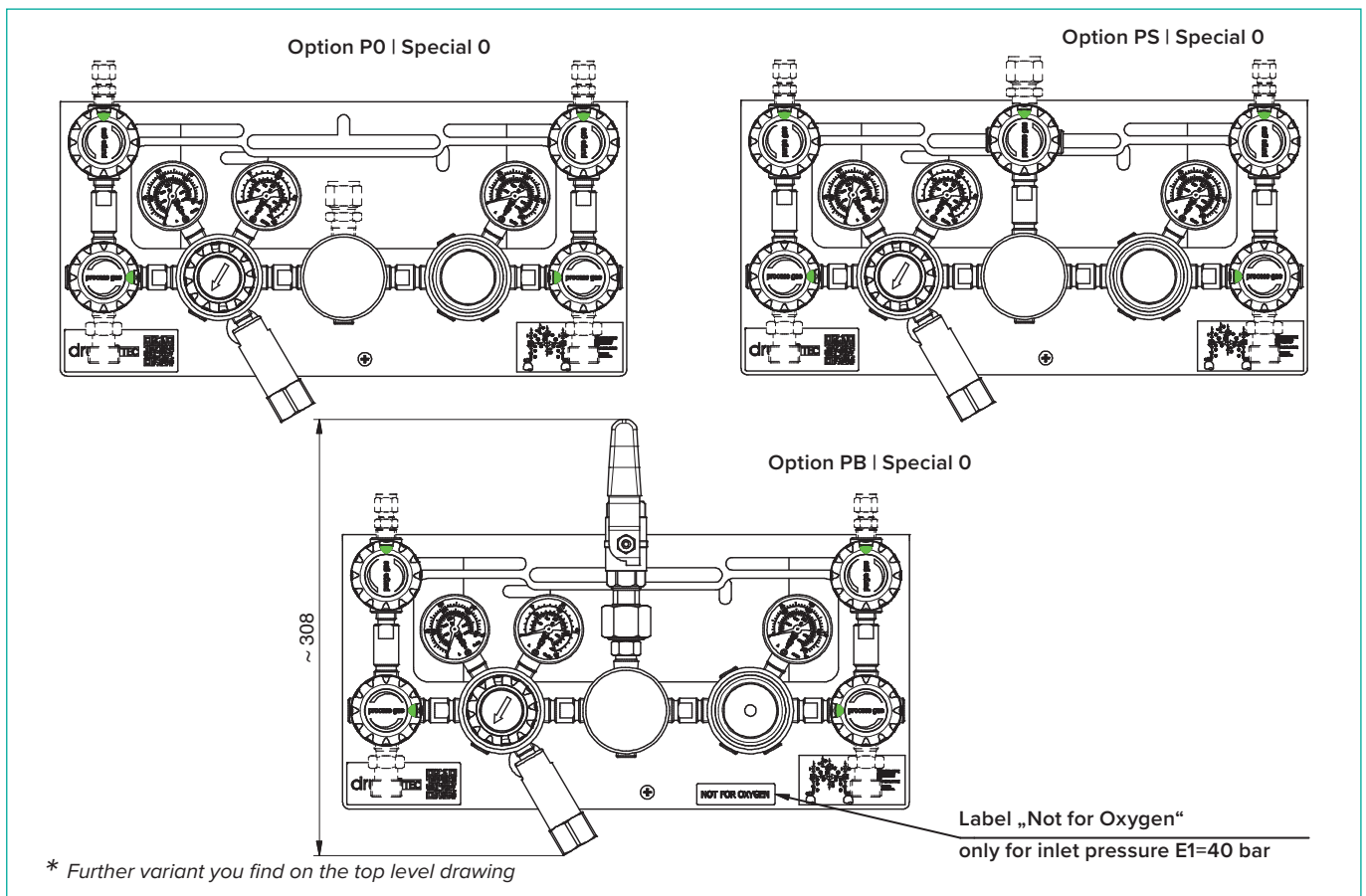
- 1- Gas cylinder
- 2- Coil
- 3 - Check valve (optional)
- 4- Shut-off valve (3xinlet; 1xoutlet)
- 5- Set pressure regulator
- 6- Fix pressure regulator
- 7- Relief valve
- 8- Shut-off valve (3xinlet; 1xoutlet) or ball valve (optional)
- 9- Safety valve (optional)
- 10- Purge outlet valve
- 11- Flashback arrestor (optional)

FOR FLOW CURVES PLEASE REFER TO – Data-FlowCurves-EN

## TECHNICAL DRAWING – DIMENSIONS



## TECHNICAL DRAWING– STANDARD VARIANTS \*



## ORDERING INFORMATION – MTMH0SSP | MTMHESP | MTMHSSSP

Example for a manifold | TEC Line | Brass | Mid Flow (100m³) | Semi-automatic changeover | Single stage | Process gas purging at inlet

| MTMH0S<br>MTMHES<br>MTMHSS | S              | PB                                | C                                                       | FX                         | EZ                          | BT                            | BT                            | N14F                                | N38F<br>(3/8" NPT<br>female)                              | N14F<br>(1/4" NPT<br>female) |
|----------------------------|----------------|-----------------------------------|---------------------------------------------------------|----------------------------|-----------------------------|-------------------------------|-------------------------------|-------------------------------------|-----------------------------------------------------------|------------------------------|
|                            | Stages         | Options                           | Specials                                                | Inlet<br>pressure<br>(bar) | Outlet<br>pressure<br>(bar) | Inlet pressure<br>gauge       | Outlet pressure<br>gauge      | Process inlet<br>connection         | Process<br>outlet<br>connection                           | Purge<br>connection          |
|                            | S single stage | P0 HP purge valve no LP valve     | 0 without                                               | F4 60                      | D2 10                       | BT Bourdon Tube Gauge         | BT Bourdon Tube Gauge         | N14F 1/4" NPT female                | Further connections<br>can be found in the<br>table below |                              |
|                            |                | PS HP purge valve LP relief valve | C Check valve                                           | FX 200                     | EZ 20                       | I1 Inductive contact gauge I1 | I2 Inductive contact gauge I2 | N38F 3/8" NPT female                |                                                           |                              |
|                            |                | PB HP purge valve LP Ball valve   | F Safety Device Flammables                              | GX 300                     | E1* 40                      | R5 Reed contact gauge R5      | R2 Reed contact gauge R2      | E2MR G3/8" male EN560 right         |                                                           |                              |
|                            |                |                                   | G Check Valve & Safety Device Flammables                |                            | F2** 100                    |                               | I1 Inductive contact gauge I1 | W2ML Whitworth 21.8x1/4" male left  |                                                           |                              |
|                            |                |                                   | H Check Valve & Safety Valve & Safety Device Flammables |                            |                             |                               | R5 Reed contact gauge R5      | W2MR Whitworth 21.8x1/4" male right |                                                           |                              |
|                            |                |                                   | N Safety Device Oxy/Air                                 |                            |                             |                               |                               | W3ML Whitworth 30x2 male left       |                                                           |                              |
|                            |                |                                   | P Check Valve & Safety Device Oxy/Air                   |                            |                             |                               |                               | W3MR Whitworth 30x2 male right      |                                                           |                              |
|                            |                |                                   | Q Check Valve & Safety Valve & Safety Device Oxy/Air    |                            |                             |                               |                               |                                     |                                                           |                              |
|                            |                |                                   | S Safety valve                                          |                            |                             |                               |                               |                                     |                                                           |                              |
|                            |                |                                   | U Check valve & safety valve                            |                            |                             |                               |                               |                                     |                                                           |                              |
|                            |                |                                   | Y Safety Device Flammables & Safety Valve               |                            |                             |                               |                               |                                     |                                                           |                              |
|                            |                |                                   | Z Safety Device Oxy/Air & Safety Valve                  |                            |                             |                               |                               |                                     |                                                           |                              |

HP= High pressure | LP= Low pressure

\* Not available in combination with option ball valve at outlet for Oxygen | \*\* Not available in combination with option ball valve at outlet

Order code (as described above) without special characters or spaces! Complete Order Code: [MTMH0SSPBCFXEZBTBTN14FN38FN14F](#)

## Process outlet connection

N38F - NPT 3/8 inch female

G12F - G 1/2 inch female

E3MR - G1/2" male EN560 right

E3ML - G1/2" male EN560 left

E5MR - G3/4" male EN560 right

M12B - Compression fitting 12 mm Brass

M15B - Compression fitting 15 mm Brass

M18B - Compression fitting 18 mm Brass

M12S - Compression fitting 12 mm Stainless Steel

M15S - Compression fitting 15 mm Stainless Steel

M18S - Compression fitting 18 mm Stainless Steel

M25S - Compression fitting 25 mm Stainless Steel

IX8B - Compression fitting 1/2 inch Brass

I10B - Compression fitting 5/8 inch Brass

I12B - Compression fitting 3/4 inch Brass

I14B - Compression fitting 7/8 inch Brass

IX8S - Compression fitting 1/2 inch Stainless Steel

I12S - Compression fitting 3/4 inch Stainless Steel

I16S - Compression fitting 1 inch Stainless Steel

DM21 - Tube 21,3 mm

## Purge connection

N14F - NPT 1/4 inch female

M06B - Compression fitting 6 mm Brass

M08B - Compression fitting 8 mm Brass

M10B - Compression fitting 10 mm Brass

M12B - Compression fitting 12 mm Brass

M06S - Compression fitting 6 mm Stainless Steel

M08S - Compression fitting 8 mm Stainless Steel

M10S - Compression fitting 10 mm Stainless Steel

M12S - Compression fitting 12 mm Stainless Steel

IX4B - Compression fitting 1/4 inch Brass

IX6B - Compression fitting 3/8 inch Brass

IX8B - Compression fitting 1/2 inch Brass

IX4S - Compression fitting 1/4 inch Stainless Steel

IX6S - Compression fitting 3/8 inch Stainless Steel

IX8S - Compression fitting 1/2 inch Stainless Steel

Availability of brass fittings depending on pressure and size.

Pay attention to the maximum approved pressure of your pipework.

